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SCIENCE ACADEMY

ZINĀTŅU AKADĒMIJA



Ali Çetinkaya Ortaokulu is a public school. It has a library, a sports saloon, a meeting room, and a teachers' room. It is very big. Its size is 8.000 m². It has a large garden. There are 330 students and 26 teachers in the school. The school provides primary and secondary education. There are disabled students using wheel chairs. It is well equipped; there is a lift for the disabled students running on wheelchairs. There are mentally retarded students. They need special help and the teachers work with them one to one. The school is located in the center of city called Afyonkarahisar.

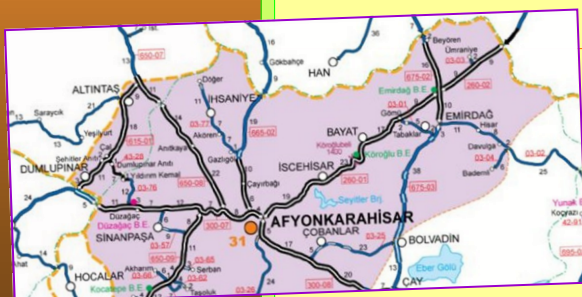
PARTNERI/PARTNERS

Niepubliczne Gimnazjum „KEGLIK” is an independent junior high school located in Środa Wielkopolska, Poland. There are 120 students aged 12-15. The staff consists of 30 teachers. The school is renowned for discovering, promoting and supporting talented young people. Its main aim is to prepare young people for their future education in the Senior High School in Środa Wielkopolska. The teachers focus on development of students' diverse interests. In order to achieve it, they use modern teaching methods during regular classes and organize extra-curricular activities. The school is well-equipped: there are interactive whiteboards in classrooms, the students use tablets in the learning process and e-learning platform helps them study efficiently at home.

Rēzeknes valsts poļu ģimnāzija was founded on September 1, 1993 in Rēzekne. It was a primary school and there were 22 pupils. In March 1997 the school was accredited as a basic school and changed its address. It moved to a new building in Lubanas street 49. In September 2002 the school became a secondary school. The school realises four licensed and accredited educational programs. In June 2010 its historic name was returned to the school - "Rēzekne Polish State Gymnasium". This 2017-2018 school year 49 teachers, 3 teachers from Poland work at school. There are 567 students. The school has got a pre - school group for preparing 5- 6 year old children for school. Every day school begins with a prayer. Pupils study according to the subject system from the first class.

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Papīrs kopējo sadzīvisko atkritumu plūsmā ieņem vienu no galvenajām vietām. Dažādās valstīs procentuāli tā daudzums ir atšķirīgs, tomēr tas sasniedz pat 40% no kopējā cieto atkritumu apjoma. Papīru ražo no celulozes pulpas (masas), kurai pievieno pigmentus un pildvielas. Izejmateriāls celulozei ir koksne. Lai saražotu 1 tonnu celulozes masas, nepieciešamas 3,5 tonnas koksnes.



Papīrs ir šķiedru samudžinājums. Kopš papīra izgudrošanas Ķīnā pirms vairāk nekā diviem tūkstošiem gadu tā izgatavošanas pamatprincipi nav mainījušies. Šķiedru izejvielu sasmalcina, samaisa ar ūdeni, lai iegūtu šķied-

ru putru, un tad to plānā kārtā spiež un žāvē. Papīru iegūst no vairāk nekā divtūkstoš augu šķiedrām: ananasiem, banāniem, cukurniedrēm, koka, liniem, salmiem u. c. Pirms diviem simtiem gadu papīru ražoja no linu auduma lupatām.

Visērtāk ir ražot papīru no koka, bet lielā papīra patēriņa dēļ nākas iznīcināt milzīgus mežu masīvus. Vienas tonnas papīra iegūšanai jānocērt 14 lieli koki, kas normālos apstākļos auguši aptuveni 60 gadu.



VĒRTĪGAIS MEŽS

Papīrs kopējo sadzīvisko atkritumu plūsmā ieņem vienu no galvenajām vietām. Dažādās valstīs procentuāli tā daudzums ir atšķirīgs, tomēr tas sasniedz pat 40% no kopējā cieto atkritumu apjoma. Izgāztuvēs ik gadu nonāk aptuveni 80 000

t papīra.. Pārstrādājot vienu tonnu makulatūras, var iegūt 800 kg papīra. Atkārtoti pārstrādājot papīru, šo koksni ietaupa. Ietaupās arī enerģija. Lai saražotu vienu tonnu pirmreizējā papīra, vajag 30 900 MJ enerģijas, kamēr tādām pašām dau-

dzumam papīra, kurš iegūts no makulatūras, vajag tikai 18 100 MJ.



Celulozes šķiedras ir iespējams pārstrādāt līdz pat septiņām reizēm, tādēļ ir svarīgi pārstrādei derīgo

papīru - avīzes, žurnālus, biroja papīru, kartona kastes u.c. - izmest atkritumu šķirošanas konteinerā.



Paper takes one of the main places in the total municipal waste stream. The percentage varies from country to country, but it reaches as much as 40% of the total solid waste. The paper is made from cellulose pulp (mass), to which pigments and fillers are added. The raw material for cellulose is wood. To produce 1 ton of pulp, 3.5 tons of wood are needed.

Paper is a tufted fiber. Since the invention of paper in China more than two thousand years ago, its basic principles have not changed. Fine raw material is crushed, mixed with water to get a fiber mess, and then pressed and dried thoroughly. The paper is made from over two hun-

dred thousand plant fibers: pineapple, banana, sugar cane, wood, flax, straw, etc. c. Two hundred years ago, paper was made from linen. The easiest way is to produce paper from the wood, but large-scale paper consumption requires the destruction of massive mas-

sifs. To harvest one ton of paper, 14 large trees should be harvested, which, under normal conditions, have grown for about 60 years.



VALUABLE FOREST

Paper takes one of the main places in the total municipal waste stream. The percentage varies from country to country, but it reaches as much as 40% of the total solid waste. About 80,000 t of paper get annually to the dumps.

Recycling one ton of waste paper can produce 800kg of paper. Recycling paper saves the wood. Energy will also be saved. To produce one ton of primary paper, 30,900 MJ of energy is needed, while the same amount

of paper from waste paper needs only 18,100 MJ.



Cellulose fibers can be recycled up to seven times, so it is important to recycle paper -

newspapers, magazines, office paper, cardboard boxes, etc. - throw it into a waste sorting container.



- ▣ **Sagriez** vai saplēs nevajadzīgu papīru ļoti sīkos gabaliņos!
- ▣ **Saber** papīra gabaliņus traukā un aplej ar siltu ūdeni!
- ▣ **Samaisi** masu tā, lai vairs neredzētu atsevišķus papīra gabaliņus, bet veidotos šķiedru putra!
- ▣ **Atstāj to nostāvēties 12 stundas!**

▣ Pirms papīra gatavošanas ielej traukā vēl nedaudz ūdens tā, lai putra būtu šķidrāka!

▣ Iegremdē smalku sietu traukā un izsmel plānu šķiedru putras kārtiņu!

▣ Ļauj ūdenim notecēt!

Uzliec plāno putras masu no sieta uz filca vai mitrumu uzsūcoša materiāla! Sākumā papīrs izskatās biezs un neglīts.

Aplāj papīra masu ar filcu vai citu mitrumu uzsūcošu materiālu un spied, uzliekot kaut ko cietu,



piemēram, finiera gabalu, gaļas dēlīti, bet pēc tam, uzkāpjot tā ar kājām, nopresē!



PAPĪRA IEGŪŠANA MĀJAS APSTĀKĻOS...



Pēc presēšanas noņem nost mitrumu uzsūcošos materiālus un atstāj pagatavoto papīru izžūt.

Cut or rip up your paper into about 1 inch squares.

Soak your paper for a few hours or overnight.

Blend. Keep blending until it's a pulp.

Leave to stay for 12 hours.

□ The more pulp to water, the thicker your paper will be.

□ Pull some sheets. For this, you'll need a mould and deckle. It's basically two frames that are the same size, one with screen attached.

Allow water to drain!

Pour the porridge mass from the sieve onto the felt or moisture absorbing material! At first, the paper looks thick and ugly. Cover the paper with a felt or other moisture absorbent material and press it gently, then place something firm,



for example, a piece of veneer, a meat slab, step on it with your feet and press firmly.



MAKING PAPER BY HAND AT HOME ...



Take your wet sheet and gently press onto the flat surface. Make sure the edges are pressed down well. Let the paper dry. Peel it off.



Ikviens dzīva būtne dabā atstāj pēdas. Cilvēki domā, ka pēdas var atstāt tikai tās dzīvās būtnes, kas kustas un pārvietojas. Bet vai augi var atstāt pēdas?



Jūnija sākumā skolēni devās ekspedīcijā skolas apkārtnē, lai meklētu augu pēdas. Nonākot ārpus skolas telpām, piedzīvojums varēja sākties.

Vai augi atstāj savas pēdas dabā? Kādas izskatās augu pēdas? Vai visiem augiem ir vienādas pēdas vai arī tās atšķiras?



Apskatot dažādus augus, ekspedīcijas dalībnieki nonāca pie secinājuma, ka katrai augu lapai ir savs zīmējums, katram zariņam ir sava uzbūve – tās ir arī augu pēdas. Lai tās labāk varētu ieraudzīt, jaunie pētnieki iekrāsoja augu lapas un veidoja to nospiedumus uz baltām papīra lapām.



Cik dažādi iznāca augu lapu nospiedumi!

Ikdienā mēs pat nenojaušam, cik daudz noslēpumu sevī glabā augi!

Ekspedīcija skolas apkārtnē „Augu pēdas dabā”





Every living entity leaves the footsteps in nature. People think that traces can be left only by those living entities that are moving and walking. But can plants leave the traces?

At the beginning of June students had an expedition around the school to look for herbs. Once outside the classroom, the adventure can start. Do the plants leave their traces in nature? What do the plant traces look like? Do all the plants have the same traces or are they different?

When looking at different plants, the expedition participants came to the conclusion that each plant leaf has its own design, each branch has its own structure - they are also plant traces. In order to see them better, young researchers coloured the leaves of the plants and printed them on white paper. How different the leaves of the plants are!

On an everyday basis, we do not even know how many secrets the plants have!

Expedition in the vicinity of the school "Plant Footprints in Nature"



Mežs ir mūsu valsts Latvijas lielākā bagātība - „zaļais zelts”. Plašie, kokiem aizaugušie līdzenumi slēpj ne tikai vērtīgus dabas resursus - sēnes, ogas, unikālus augus, tie dod mājās dažādu putnu un dzīvnieku sugām. Mežs nodrošina mūs ar praktiskām vērtībām, ko lietojam ikdienā - malku, papīru. Tā ir lielākā eksportprece Latvijā.



Mēs labprāt biežāk uzturētos zaļajā vidē, tomēr pilsētnieku ikdienas steiga to liedz. Vēlme būt tuvāk dabai, padarīt skaistāku vidi, kurā dzīvojam un mācāmies, rosināja mūs iesaistīties skolas apzaļumošanas projektā. Tā mēs strādājām...

RVPĢ skolēni



The forest is the largest treasure of Latvia - the "green gold" of Latvia. The wide, overgrown plains hide not only valuable natural resources - mushrooms, berries, unique plants, they give home to various species of birds and animals. The forest provides us with the practical values we use every day - wood, paper. It is the largest export commodity in Latvia.



We would love to stay in a green environment more often, however, the everyday rush of townspeople prevents it. The desire to be closer to nature, to make the environment we live in and learn more beautiful, encouraged us to get engaged in a school greening project. And this is how we worked ...



Students of
RPSG



